



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
REGION 8

1595 Wynkoop Street  
Denver, CO 80202-1129  
Phone 800-227-8917  
www.epa.gov/region8

**JUN 27 2017**

Ref: 8WP-SUI

Ms. Susana Lara-Mesa  
Engineering Project Manager  
K.P. Kauffman Company, Inc.  
1675 Broadway, Suite 2800  
Denver, Colorado 80202

Re: Draft Major Permit Modification to Reconstruct the Suckla Farms No. 1, Weld County,  
Colorado, Permit No. CO10938-02115, API No. 05-123-14291

Dear Ms. Lara-Mesa:

Enclosed are a Draft Underground Injection Control (UIC) Major Modification, Draft Statement of Basis and announcement of Public Notice for the proposed revisions to the Permit. Our office has prepared a Draft Major Modification to incorporate your request to amend construction plans for the Suckla Farms No. 1 Class I non-hazardous injection well noted in the subject line.

As discussed during previous correspondences in May and June 2017, the Environmental Protection Agency Region 8 is currently accepting comments for the request to modify the Permit during the thirty (30) day public comment period. An announcement requesting public comment has been published in the Longmont Times-Call of Longmont, Colorado, and the Denver Post of Denver, Colorado. The procedures for submission of comments as well as for the EPA's consideration of such comments are set forth in 40 CFR, Part 124, Subpart A. Please be aware that a Final Major Modification Permit decision for the well will not be made until after the public comment period closes.

If you have any questions or comments on this action, please contact Linda Bowling at (303) 312-6254. Correspondence regarding the Draft Major Modification should be directed to the letterhead address to the attention of: Linda Bowling citing "MAIL CODE: 8WP-SUI".

Sincerely,

Douglas Minter  
UIC Unit Manager  
Office of Water Protection

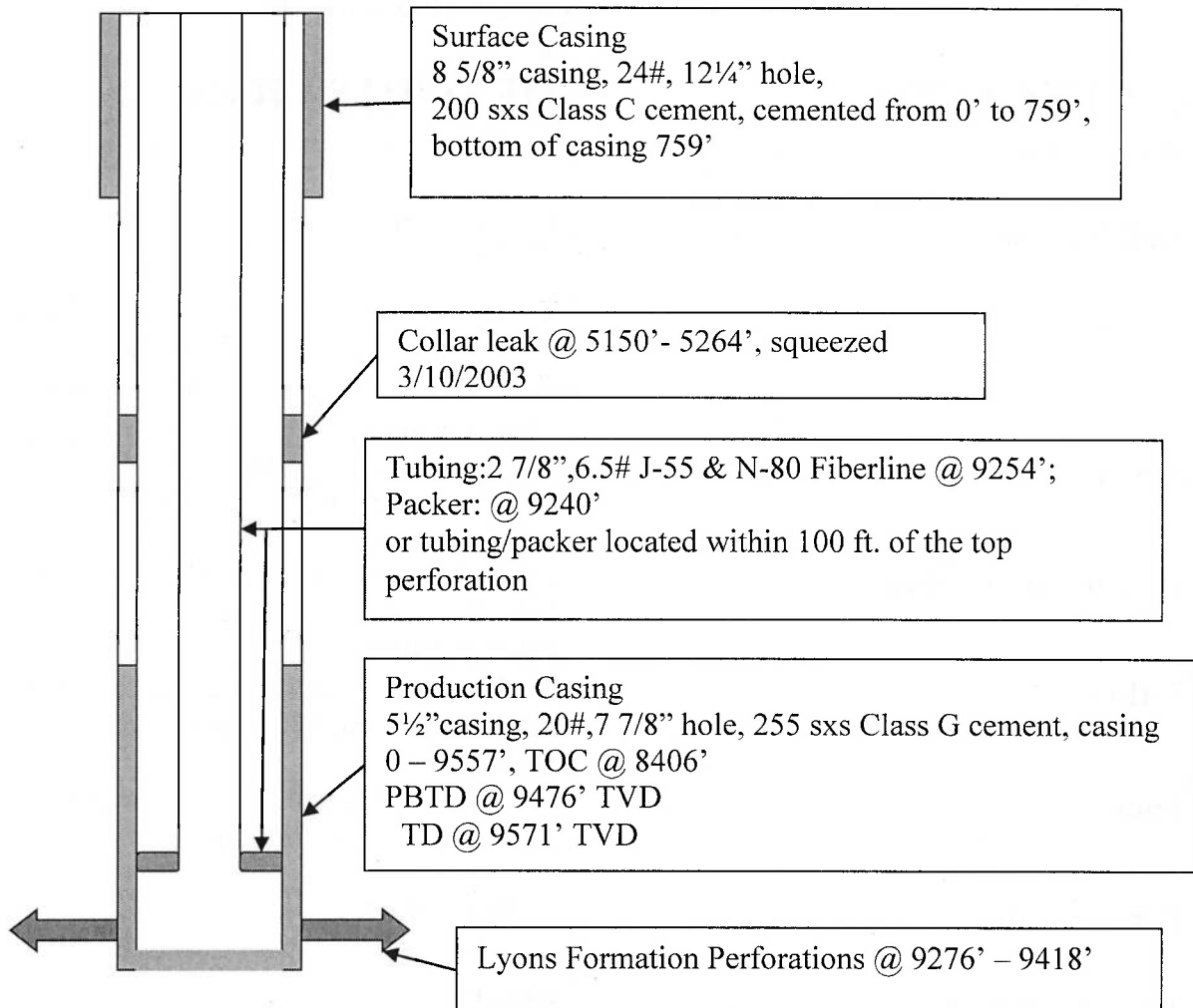
Enclosures (3)

cc: Jim Annable  
Bureau of Land Management  
jannable@blm.gov

*Original Diagram*

Suckla Farms #1 Disposal Well

SENW, 500 feet (ft.) from the south line and 2020 ft. from the west line, Section 10,  
Township 1 North, Range 67 West, Weld County, Colorado  
API No. 05-123-14291



**DRAFT MAJOR MODIFICATION  
APPENDIX A CONSTRUCTION PROCEDURE**

*Original Language*

The construction procedures for the SUCKLA FARMS INJECTION WELL #1, are presented below.

**APPENDIX A CONSTRUCTION PROCEDURE**

<b>CATEGORY</b>	<b>DESCRIPTION</b>
<b>Well Name</b>	Suckla Farms Injection Well #1
<b>API Number</b>	05-123-14291
<b>Location</b>	SENW, 500 feet (ft.) from the south line and 2020 ft. from the west line, Section 10, Township 1 North, Range 67 West, Weld County, Colorado
<b>Surface Casing</b>	8 5/8-inch casing, 24 lb. weight, 12 ¼ inch hole, 0 – 759 ft. depth of casing, cemented between 0 – 759 ft.
<b>Production Casing</b>	5 ½ inch casing, 20 lb. weight, 7 7/8-inch hole, 0 – 9557 ft. depth of casing, cemented between 8406 ft. – 9557 ft.
<b>Tubing</b>	2 7/8 inch Fiberline tubing, shall be set at 9254 ft. or within 100 ft. of the top open perforation
<b>Packer</b>	Packer shall be set at 9240 ft. or within 100 ft. of the top open perforation
<b>Perforations</b>	9276 ft. – 9418 ft.
<b>Top of Cement</b>	8406 ft.
<b>Total Depth</b>	9571 ft.
<b>Plug Back Total Depth</b>	9476 ft.

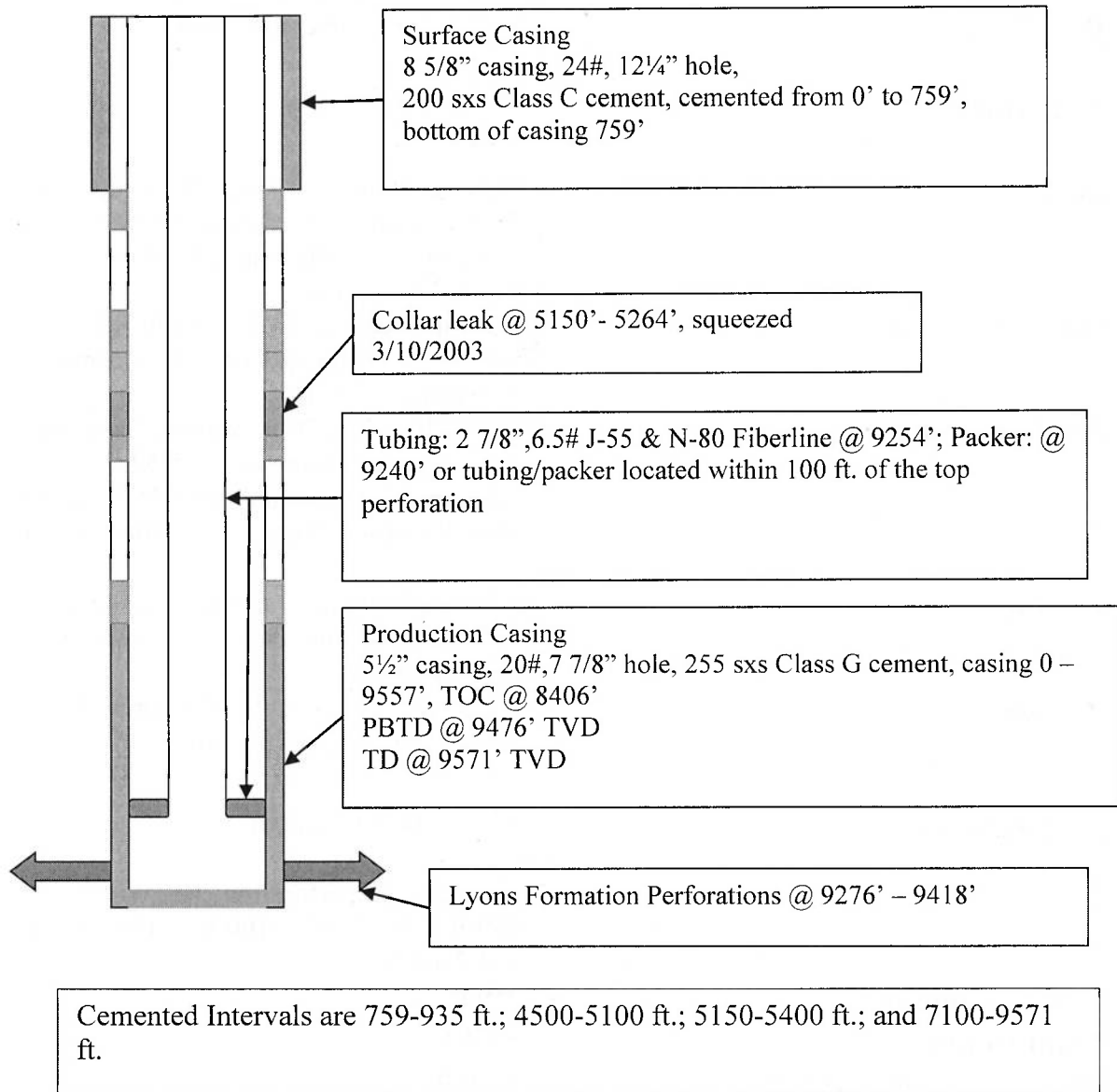
## APPENDIX A CONSTRUCTION PROCEDURE

### *Modified Language*

The construction procedures for the SUCKLA FARMS INJECTION WELL #1, are presented below.

<b>CATEGORY</b>	<b>DESCRIPTION</b>
<b>Well Name</b>	Suckla Farms Injection Well #1
<b>API Number</b>	05-123-14291
<b>Location</b>	SENW, 500 feet (ft.) from the south line and 2020 ft. from the west line, Section 10, Township 1 North, Range 67 West, Weld County, Colorado
<b>Surface Casing</b>	8 5/8-inch casing, 24 lb. weight, 12 ¼ inch hole, 0 – 759 ft. depth of casing, cemented between 0 – 759 ft.
<b>Production Casing</b>	5 ½ inch casing, 20 lb. weight, 7 7/8-inch hole, depth of casing is 0 – 9557 ft.
	Cemented Intervals are 759-935 ft.; 4500-5100 ft.; 5150-5400 ft.; and 7100-9571 ft.
<b>Tubing</b>	2 7/8 inch Fiberline tubing, shall be set at 9254 ft. or within 100 ft. of the top open perforation
<b>Packer</b>	Packer shall be set at 9240 ft. or within 100 ft. of the top open perforation
<b>Perforations</b>	9276 – 9418 ft. (open)  All squeezed perforations below: 759-935 ft.; 4500 - 5100 ft.; 5150-5400 ft.; and 7100-8406 ft.
<b>Top of Cement</b>	759 ft.
<b>Total Depth</b>	9571 ft.
<b>Plug Back Total Depth</b>	9476 ft.
Depths are approximate and will be verified with a Cement Bond Log (CBL) following the completion of all well reconstruction activities. A well completion form and Part I mechanical integrity test results will also be required.	

*Modified Diagram*  
 Suckla Farms #1 Disposal Well  
 SENW, 500 feet (ft.) from the south line and 2020 ft. from the west line, Section 10,  
 Township 1 North, Range 67 West, Weld County, Colorado  
 API No. 05-123-14291



**Draft**

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Darcy O'Connor  
Assistant Regional Administrator  
Office of Water Protection

**Draft**

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Date

## **STATEMENT OF BASIS**

### **Draft Major Modification for Final Permit Renewal**

Suckla Farms #1 Underground Injection Well  
SENW, 500 feet (ft.) from the south line (FSL) and 2020 ft. from the west line (FWL),  
Section 10, Township 1 North, Range 67 West  
Weld County, Colorado

EPA PERMIT NO. CO10938-02115

COMMERCIAL NON-HAZARDOUS  
CLASS I DISPOSAL FACILITY

WELD COUNTY, COLORADO

Wattenberg Disposal, LLC  
1675 Broadway, Suite 2800  
Denver, Colorado 80202

Dated: June 2017

**CONTACT:** Linda Bowling  
U. S. Environmental Protection Agency Region 8  
Office of Water Protection; 8WP-SUI  
1595 Wynkoop Street  
Denver, Colorado 80202-1129  
Telephone: 800-227-8917, extension 312-6254

This STATEMENT OF BASIS gives the derivation of site-specific UIC Permit conditions and reasons for them. Referenced sections and conditions correspond to sections and conditions in the Permit.

This Major Modification contains the following changes:

- Table 2.1 Geological Setting of the Statement of Basis. Identification of the Pierre Shale Formation as both a USDW and other portions as a confining zone.
- Table 2.4 Underground Sources of Drinking Water (USDW) of the Statement of Basis. Identification of portion of the Pierre Shale Formation as a USDW.
- Table 3.1 Well Construction Requirements Suckla Farms Injection Well #1 of the Statement of Basis. The cemented interval has been revised to identify additional depths to which the longstring casing will be perforated to squeeze cement behind pipe.
- Appendix A Construction Procedure of the Permit has been altered to identify the placement of cement behind pipe for the Pierre Shale, Codell, and Niobrara Formations.

## **PART II. Permit Considerations (40 CFR 146.24)**

### **Geologic Setting (TABLE 2.1)**

**TABLE 2.1  
GEOLOGIC SETTING  
SUCKLA FARMS INJECTION WELL #1**

<b>FORMATION NAME</b>	<b>GEOLOGICAL DESCRIPTION</b>	<b>TOP DEPTH, ft.</b>	<b>BOTTOM DEPTH, ft.</b>	<b>TDS mg/l</b>	<b>ZONE TYPE</b>
Arapahoe	Sandstone, siltstone and shale	350		< 10,000 mg/l	USDW
Laramie	Sandstone, mudstone, clay and coal	unknown		< 10,000 mg/l	USDW
Fox Hills	Sandstone, siltstone and shale	650		< 10,000 mg/l	USDW
Pierre Shale	Shale	700			Upper Portion is a USDW and remainder is a Major confining zone
Niobrara Shale	Shale	7362			Confining zone
Codell	Silty, shaley and fine-grained sandstone	7694		unknown	Geological Setting



J Sand	Sandstone, Siltstones and shale	8133		unknown	Geological Setting
Dakota Sandstone	Sandstone and shale	8281		unknown	Geological Setting
Lakota Sandstone	Sandstone	8368		unknown	Geological Setting
Morrison	Mudstone, sandstone, siltstone and limestone	8404			Confining zone
Entrada	Sandstone	8562		unknown	Geological Setting
Harriman Shale (Forell)	Shale	9069	9139		Confining zone
Blaine Salt	Anhydrite and Shale	9143	9274		Confining Zone
Lyons Sandstone	Sandstone	9274	9422	33,000 mg/l	Injection zone
Santanka Shale	Shale	9422			Confining zone

*The upper portion of the Pierre Shale has been identified as an Underground Source of Drinking Water.*

#### **Underground Sources of Drinking Water (USDWs) (TABLE 2.4)**

Aquifers or the portions thereof which contain less than 10,000 mg/l total dissolved solids (TDS) and are being or could in the future be used as a source of drinking water are considered to be USDWs. The USDWs in the area of this facility are identified in TABLE 2.4.

**TABLE 2.4**  
**UNDERGROUND SOURCES OF DRINKING WATER (USDW)**

<b>FORMATION NAME</b>	<b>GEOLOGICAL DESCRIPTION</b>	<b>TOP DEPTH, ft.</b>	<b>BOTTOM DEPTH, ft.</b>	<b>TDS mg/l</b>	<b>ZONE TYPE</b>
Arapahoe	Sandstone, siltstone, and shale	350		<10,000 mg/l	USDW
Laramie	Sandstone, mudstone, clay and coal			<10,000 mg/l	USDW
Fox Hills	Sandstone, siltstone and shale	650		<10,000 mg/l	USDW
Pierre Shale	Sandstone	700	885	<10,000 mg/l	USDW

*The upper portion of the Pierre Shale is used to recover water for domestic use and is considered a USDW.*

**PART III. Well Construction (40 CFR 146.22)**

**TABLE 3.1  
WELL CONSTRUCTION REQUIREMENTS  
SUCKLA FARMS INJECTION WELL #1**

<b>Casing Type</b>	<b>Hole Size (in.)</b>	<b>Casing Size (in.)</b>	<b>Cased Interval (ft.)</b>	<b>Cemented Interval (ft.)</b>
Surface	12 ¼	8 5/8	0 – 759	0 – 759
Longstring	5 ½	7 7/8	0 – 9557	759-935; 4500- 5100 5150-5400; 7100-9571

The approved well completion plan will be incorporated into the Permit as APPENDIX A and will be binding on the Permittee. Modification of the approved plan is allowed under 40 CFR 144.52(a)(1) provided written approval is obtained from the Director prior to actual modification.

**Casing and Cementing (TABLE 3.1)**

Cement will be added behind pipe to comply with requirements to protect underground sources of drinking water. The additional cement will be placed to prevent contaminants from migrating into USDW due to hydraulic fracking activities proposed in a nearby location. The operator shall run a cement bond log and perform a Part I (Internal) Mechanical Integrity Test following the completion of re-construction activities. The operator shall also update and provide a well completion form to identify all changes made to the Suckla Farms Injection Well.

## **Administrative Copy**

CO10938-02115

Major Permit Modification  
Wattenberg Disposal, LLC, Suckla Farms No. 1 Well  
Weld County, Colorado

Permit Modification Writer: Linda Bowling, [bowling.linda@epa.gov](mailto:bowling.linda@epa.gov), (303) 312-6254

### **U.S. ENVIRONMENTAL PROTECTION AGENCY ANNOUNCEMENT OF PUBLIC NOTICE OF GROUND WATER PERMIT ACTION**

The U.S. Environmental Protection Agency (EPA) intends to issue an Underground Injection Control (UIC) permit-related action, under the authority of the Safe Drinking Water Act and UIC program regulations, for the Suckla Farms No. 1 Well Permit operated by Wattenberg Disposal, LLC, EPA permit number CO10938-02115. This action would authorize the operator to place additional cement behind the longstring casing of the Suckla Farms No. 1 at the depths of several formations: Pierre Sandstone and Shale, Niobrara, Sussex Sandstone, Shannon Sandstone, Codell, Carlile Shale, Huntsman, J Sand, Dakota Sandstone, Lakota, and Morrison. Re-construction of the Suckla Farms No. 1 well will involve the placement of additional cement behind pipe to prevent contaminants from migrating into USDWs as a result of fracking activities occurring in nearby wells. Cement will be placed behind pipe at the depths of 759 – 935 ft; 4500-4600 ft; 4700 – 5100 ft; 5200 -5400 ft; and 7100 – 8406 ft. The public notice, which requests comments on this action within 30 days, can be found at the EPA Region 8 UIC program's website: <https://www.epa.gov/uic/underground-injection-control-epa-region-8-co-mt-nd-sd-ut-and-wy#guidance>.

Alternatively, the public may contact or call Linda Bowling at [bowling.linda@epa.gov](mailto:bowling.linda@epa.gov), 1-800-227-8917 extension 312-6254 or (303) 312-6254 to get a copy of the public notice and/or documentation associated with this section.